

State of California  
AIR RESOURCES BOARD

## EXECUTIVE ORDER A-10-480

Relating to Certification of New Heavy-Duty Motor Vehicle Engines

## FORD MOTOR COMPANY

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102 and 43103 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-3;

IT IS ORDERED AND RESOLVED: That the following Ford Motor Company 1991 model-year diesel engines are certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) over 14,000 pounds:

<u>Engine Family</u>	<u>Displacement Liters (Cubic Inches)</u>	<u>Exhaust Emission Control Systems (Special Features)</u>
MFM07.8FPK8	7.8/6.6 (474/401)	(Turbocharger) (Charge Air Cooler)

Engine models and codes are listed on attachments.

The following are the certification emission standards for this engine family:

<u>Hydrocarbons gm/bhp-hr</u>	<u>Carbon Monoxide gm/bhp-hr</u>	<u>Nitrogen Oxides gm/bhp-hr</u>	<u>Particulates gm/bhp-hr</u>
1.3	15.5	5.0	0.25

The following are the certification emission values for this engine family:

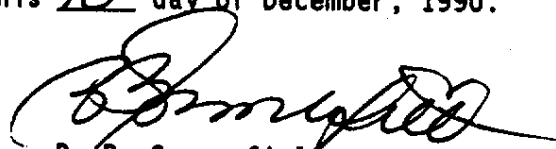
<u>Engine Family</u>	<u>Hydrocarbons gm/bhp-hr</u>	<u>Carbon Monoxide gm/bhp-hr</u>	<u>Nitrogen Oxides gm/bhp-hr</u>	<u>Particulates gm/bhp-hr</u>
MFM07.8FPK8	0.3	1.8	4.8	0.22

BE IT FURTHER RESOLVED: That the Executive Officer has been provided all material required to demonstrate certification compliance with the Board's emission control system warranty regulations (Health and Safety Code Section 43205.5 and Title 13, California Code of Regulations, Section 2036).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this order and attachments.

Executed at El Monte, California this 10<sup>th</sup> day of December, 1990.

A handwritten signature in dark ink, appearing to read "R. B. Summerfield", is written over the typed name and title.

R. B. Summerfield  
Assistant Division Chief  
Mobile Source Division

E.O.# A-10-480

1991 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer Ford Motor Company Engine Family MFM07.8FPK8 (L7.8PK8)  
Evaporative Family Not Applicable Engine Type I-6  
Liters (CID) 6.6L (401) 7.8L (474)

ABBREVIATIONS:

<u>Ignition System</u>	<u>Exhaust Emissions Control System</u>	<u>Fuel System</u>
DLI-Distributorless Ignition	AIR-Secondary Air Injection	DI-Direct Injection (Diesel)
EI-Electronic Ignition	ECTS-Engine Coolant Temp Sensor	EIC-Electronic Injection Control (Diesel)
PCME-Powertrain Control Module	EGR-Exhaust Gas Recirculation	IC-Intercooler or Aftercooler
	EM-Engine Modification	IDI-Indirect Diesel Injection
	HO2S-Heated Oxygen Sensor	MPI-Multipoint Electronic Fuel Injection
	KS-Knock Sensor	SC-Supercharged
	MAP-Manifold Absolute Pressure Sensor	SMPI-Sequential Multipoint Electronic Fuel Injection
	OC-Oxidation Catalyst	TAA-Turbocharged, Air to Air (Diesel)
	O2S-Oxygen Sensor	TAW-Turbocharged, Air to Air to Water (Diesel)
<u>Special Features</u>	SABV-Secondary Air Bypass Valve	TBI-Throttle Body Electronic Fuel Injection
MIL-Malfunction Indicator Light	SASV-Secondary Air Switching Valve	
OBD-On Board Diagnostics	SPL-Smoke Puff Limiter	
	TOC-Trap Oxidizer: Continuous	
	TOP-Trap Oxidizer: Periodic	
	TPS-Throttle Position Sensor	
	TWC-Three Way Catalyst	
	TWC+OC-Three Way Catalyst Plus Oxidation Catalyst	
	WUOC-Warm Up Oxidation Catalyst	
	WUTWC-Warm Up Three Way Catalyst	

VEHICLE MODELS: Reference page 20.17.02.00-2.

Engine Family: M7.8PK8

Issue Date	11-21-90	20.17.02.00-1					
Revised							

1991 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
HEAVY-DUTY DIESEL ENGINES

Manufacturer Ford Motor Company Engine Family MFM07.8FPK8 (M7.8PK8)

Liter (CID) 7.8L (474 CID), 6.6L (401 CID) Eng. Type I6

Emission Control Sys. (Special Features) DID, TC, IC

Engine Code	Fuel Injection Pump Mfr. P/N (-9A543-)	Fuel Injector Mfr. P/N (-9F593-)	Rated HP at RPM	Fuel Rate at Rated HP (ccm/stroke)	Particulate Trap/Catalyst Mfr. P/N
1-80J-R00	FOHN-GA	E9HN-EB	165 @ 2550	88	N/A
1-80B-R00	E9HN-EB	E9HN-EB	170 @ 2600	88	N/A
1-80A-R00	E9HN-SA	E9HN-EB	185 @ 2400	97	N/A
1-85H-R00	E9HN-KA	FOHN-AA	190 @ 2300	106	N/A
1-85G-R00	E9HN-LA	FOHN-BA	210 @ 2300	114	N/A
1-85F-R00	E9HN-PA	FOHN-BA	215 @ 2000	124	N/A
1-85E-R00	E9HN-NA	FOHN-BA	225 @ 2300	122	N/A
1-85D-R00	E9HN-MA	FOHN-CA	240 @ 2300	129	N/A
1-85C-R00	E9HN-TA	FOHN-DA	270 @ 2300	144	N/A
1-85C-R10	E9HN-TA	FOHN-DA	270 @ 2300	144	N/A

Engine Family: M7.8PK8

20.17.02.00-2

Date of Issue: 11-21-90  
Revisions: 8-15-91